IN THE SPECIFICATION:

Please amend paragraph **[0001]** as follows:

[0001] This application is a divisional of application Serial No. 09/943,774, filed August 30, 2001, ~~pending.~~ now U.S. Patent 7,037,177, issued May 2, 2006.

Please amend paragraph **[0008]** as follows:

[0008] A desired surface roughness of a CMP pad is usually imparted to the pad by a so-called "break-in" conditioning process following placement of the pad on a polishing tool. Conditioning is also used to remove slurry from a CMP pad polishing surface and to restore the desired surface texture or roughness and planarity to the polishing surface thereof after the pad has been used to polish semiconductor device structures. Typically, a pad is conditioned by dragging the same across a rough or abrasive pad conditioner, such as a diamond or ~~diamond-on-metal~~ diamond-on-metal conditioner. The pad conditioner may also remove surface irregularities (*e.g.*, protrusions) from the CMP pad, improving the planarity of the pad. Conventionally, CMP pads have been conditioned by rotating one or both of the CMP pad and the pad conditioner relative to one another for time periods of twenty minutes or more. Conditioning is often effected using the same equipment that is used to rotate the CMP pad during polishing. As a result, conditioning may undesirably tie up the CMP equipment, as well as the equipment operator's attention, for long periods of time that could otherwise be used to polish semiconductor substrates. Moreover, conventional conditioning processes are sometimes ineffective.

Please amend paragraph **[0031]** as follows:

[0031] As another example, abrasive particles 14 may be formed from iron (Fe) or an iron-containing material (*e.g.*, steel, or other iron-containing alloys such as INVAR®), copper, nickel, tungsten, or another suitable metal. A degradant or solvent for such abrasive particle 14 materials which does not substantially degrade or dissolve the materials from which CMP pads are fabricated, may be used to remove any remaining abrasive particles 14 from a CMP pad. By

way of example only, iron and iron-containing materials may be degraded or dissolved by hydrochloric acid, which does not substantially degrade or dissolve the materials, such as polyurethane, from which CMP pads are conventionally fabricated. As another example, nitric acid, ~~phosphric~~ phosphoric acid, sulfuric acid, other acids, and acid mixtures may be used to degrade or dissolve abrasive particles 14 of other materials or oxides thereof. Additives, such as oxidants (*e.g.*, hydrogen peroxide (H_2O_2)), may also be used to facilitate the degradation and/or dissolution of abrasive particles 14.

Please amend paragraph **[0032]** as follows:

[0032] Abrasive particles 14 may be of any suitable size and be located on a conditioning surface 16 of supporting substrate 12 in any density that will impart a polishing surface of a CMP pad with a desired, conditioned finish. By way of example only, abrasive particles 14 exhibiting a diameter or width dimension (if not spherical) of about 25 μm to about 500 μm will impart the desired characteristics to a polishing surface of a CMP pad. Materials that are useful as abrasive particles 14, including the exemplary quartz, iron or ~~iron-containing~~ iron-containing materials, and other materials identified previously herein, are commercially available.

Please amend paragraph **[0046]** as follows:

[0046] As abrasive particles 14 (FIGs. 1-3) or debris 46 (FIG. 7) from filaments 44 (FIG. 5) or from abrasive elements 54 (FIG. 6) may be loosened from conditioner 10, 10′, 10″, 40 during use thereof to condition polishing surface 22 of CMP pad 20 (FIG. 4), abrasive particles 14 or debris 46 may stick to polishing surface 22 of CMP pad 20 or become embedded or entrapped within CMP pad 20, as shown in FIG. 7. These abrasive particles 14 or debris 46 may be substantially removed from CMP pad 20 at the conclusion of the conditioning operation by exposing CMP pad 20, along with abrasive particles 14 or debris 46, thereon to a chemical 80 or mixture of chemicals that will degrade or dissolve abrasive particles 14 or debris 46 at a faster rate than chemical 80 or a mixture of chemicals will degrade or dissolve the material or materials

of CMP pad 20 and without significantly changing the surface features, texture, or roughness of polishing surface 22 of CMP pad 20. Preferably, chemical 80 or a mixture of chemicals that is used to remove abrasive particles 14 or debris 46 from CMP ~~pad~~ pad 20 will do so without substantially degrading or dissolving the material or materials of CMP pad 20. As indicated previously herein, when abrasive particles 14 include quartz, or crystalline silicon dioxide, chemical 80 may include, without limitation, hydrofluoric acid, sodium hydroxide, or potassium hydroxide. If a hydrofluoric acid solution is used, the hydrofluoric acid preferably makes up at least about 5% of the solution. If abrasive particles 14 or debris 46 comprise iron or an iron-containing material, chemical 80 may include, without limitation, hydrochloric acid.

Please amend paragraph **[0047]** as follows:

[0047] Although FIG. 7 illustrates exposing CMP pad 20, along with abrasive particles 14 and debris 46 on and embedded or entrapped within polishing surface 22 thereof, to chemical 80 by way of spraying chemical 80 onto at least a portion of CMP pad 20, such exposure to chemical 80 may alternatively be effected by immersing CMP ~~pad,~~ pad 20, or at least a portion of polishing surface 22 thereof, in chemical 80 or otherwise, as known in the art.

Please amend paragraph **[0051]** as follows:

[0051] In addition, conditioning system 60 may include a physical abrasive removal component 90, 90'. As shown in FIG. 9, one embodiment of a physical abrasive removal component 90 includes a brush 92 configured to sweep across polishing surface 22 of CMP pad 20 as CMP pad 20 is rotated. Physical abrasive removal component 90 may also include a spray 94 of chemical 80 or of a rinsing liquid, which may also facilitate the removal of abrasive particles 14 or debris 46 from polishing surface 22. Brush 92 and spray 94 may be laterally translatable relative to polishing surface 22 of CMP pad 20. Accordingly, physical abrasive removal component 90 may physically remove abrasive particles 14 or debris 46 from at least polishing surface 22 of CMP pad 20 as abrasive particles 14 or debris 46 are being degraded or dissolved by chemical 80. In addition, if polishing surface 22 faces downwardly, abrasive particles 14 or debris 46 removed therefrom would fall away from CMP pad 20, thereby further facilitating removal of abrasive particles 14 or other debris 46 from CMP pad 20.